

interleukin-18 comprising the amino acid sequence of SEQ ID NO:6 or a functional equivalent thereof as an effective ingredient, said interleukin-18 or a functional equivalent thereof being capable of exerting osteoclastogenic inhibitory activity.

2. The inhibitory composition of claim 1, wherein said interleukin-18 or a functional equivalent thereof comprises each of the amino acid sequences of SEQ ID NO:1, SEQ ID NO:2, and SEQ ID NO:3.

3. The inhibitory composition of claim 1, wherein said interleukin-18 or its functional equivalent thereof comprises both the amino acid sequences of SEQ ID NO:4 and SEQ ID NO:5.

4. The inhibitory composition of claim 1, wherein said effective ingredient is interleukin-18 comprising the amino acid sequence of SEQ ID NO:6.

5. The inhibitory composition of claim 1, wherein said interleukin-18 is of human origin.

6. The inhibitory composition of claim 1, wherein said functional equivalent of interleukin-18 comprises the amino acid sequence of SEQ ID NO:7.

8. The inhibitory composition of claim 1, which further comprises as a stabilizer a member selected from the group consisting of proteins, buffers, saccharides, and mixtures thereof.

9. The inhibitory composition of claim 1, which is in the form of a member selected from the group consisting of liquids, pastes, and solids.

10. The inhibitory composition of claim 1, which contains 0.000002-100 w/wt of said interleukin-13.

11. A method for treating a disease associated with excessive osteoclast formation or activity, comprising administering said inhibitory composition of claim 1 to patients suffering from said disease at a dose of about 0.5 µg to 100 mg per shot, 2 to 6 fold a day or 2 to 10 fold a week from one day to one year.

Please cancel claim 7 without prejudice and add new claims 12-27 as follows:

12. A method for treating a disease associated with excessive osteoclast formation or activity and selected from the group consisting of hypercalcemia, arthropathy, deformity, osteitis, osteopenia, and osteoporosis, comprising administering an osteoclastogenic inhibitory composition to a patient suffering from said disease, wherein said composition comprises (i) 0.000002-100 w/w % of interleukin-13 comprising the amino acid sequence of SEQ ID NO:6 or a functional equivalent thereof capable of exerting osteoclastogenic inhibitory activity, as an effective ingredient, and (ii) a pharmaceutically-acceptable carrier.

13. The method of claim 12, wherein said interleukin-18 or a functional equivalent thereof comprises each of the amino acid sequences of SEQ ID NO:1, SEQ ID NO:2, and SEQ ID NO:3.

14. The method of claim 11, wherein said interleukin-18 or a functional equivalent thereof comprises both the amino acid sequences of SEQ ID NO:4 and SEQ ID NO:5.

15. The method of claim 11, wherein said effective ingredient is interleukin-18 comprising the amino acid sequence of SEQ ID NO:6.

16. The method of claim 12, wherein said interleukin-18 is of human origin.

17. The method of claim 11, wherein said functional equivalent of interleukin-18 comprises the amino acid sequence of SEQ ID NO:7.

18. The method of claim 13, wherein said osteoclastgenic inhibitory composition further comprises as a stabilizer a member selected from the group consisting of proteins, buffers, saccharides, and mixtures thereof.

19. The method of claim 13, wherein said osteoclastgenic inhibitory composition is in the form of a member selected from the group consisting of liquids, pastes, and solids.

20. A method for treating a disease associated with excessive osteoclast formation or activity and selected from the group consisting of osteoclastoma, Behcet's syndrome,

osteosarcoma, chronic rheumatoid arthritis, and primary hyperthyroidism, comprising administering an osteoclastogenic inhibitory composition to a patient suffering from said disease, wherein said composition comprises (i) 0.000002-100 w/w % of interleukin-18 comprising the amino acid sequence of SEQ ID NO:6 or a functional equivalent thereof capable of exerting osteoclastogenic inhibitory activity, as an effective ingredient, and (ii) a pharmaceutically-acceptable carrier.

21. The method of claim 20, wherein said interleukin-18 or a functional equivalent thereof comprises each of the amino acid sequences of SEQ ID NO:1, SEQ ID NO:2, and SEQ ID NO:3.

22. The method of claim 20, wherein said interleukin-18 or a functional equivalent thereof comprises both the amino acid sequences of SEQ ID NO:4 and SEQ ID NO:5.

23. The method of claim 20, wherein said effective ingredient is interleukin-18 comprising the amino acid sequence of SEQ ID NO:6.

24. The method of claim 20, wherein said interleukin-18 is of human origin.

25. The method of claim 20, wherein said functional equivalent of interleukin-18 comprises the amino acid sequence of SEQ ID NO:7.

26. The method of claim 20, wherein said osteoclastogenic inhibitory composition further comprises as a